

NEW WESTERN SLUGS.

BY T. D. A. COCKERELL.

Prophysaon pacificum Cockerell, n. sp.

Length (in alcohol) $17\frac{1}{2}$ mill. Body and mantle ochery-brown, head and neck gray. Mantle granulated, rather broad, with a black band on each side not reaching the anterior border; these bands are furthest ($2\frac{1}{4}$ mill.) apart near the respiratory orifice, from which point they converge posteriorly, and anteriorly by the bending of the band on the right side. Length of mantle $7\frac{3}{4}$ mill., breadth 4 mill. Respiratory orifice $3\frac{1}{4}$ mill. from anterior border. Body cylindrical, rounded and very blunt at end, not conspicuously tapering. Distance from posterior end of mantle to end of body, 8 mill. Body dark grayish-ochre above, with an indistinct pale dorsal line; sides paler. Reticulation distinct, with indistinct "foliations." Sole somewhat transversely wrinkled, but not differentiated into tracts. Jaw dark, strongly curved, blunt at ends, with about 10 well-marked ribs. Lingual membrane, with about 35-1-35 teeth; centrals tricuspid, the side cusps very small, laterals bicuspid, marginals with a large sharp straight point, and a small outer one. Compared with *P. humile* the centrals are slightly shorter and broader. Liver dark gray-brown.

Found by Mr. H. F. Wickham under logs in ditches by the roadside and damp places at Victoria, Vancouver Island, 1889.

This is a very distinct species, easily recognized by its color, the absence of dark bands on the body, the pale dorsal line, and the blunt posterior extremity.

Prophysaon flavum Cockerell, n. sp.

Length (in alcohol) 25 mill. Body and mantle dull ochreous, head and neck ochreous. Mantle tuberculate-granulose, grayish-ochre, pale at edges, and with black marbling or spots in place of the bands of *P. pacificum*. Length of mantle 11 mill., breadth $5\frac{1}{2}$ mill. Respiratory orifice 5 mill. from anterior border. Body cylindrical, hardly tapering, and blunt at end. Distance from posterior end of mantle to end of body, 14 mill. Body dark grayish-ochre above, with a pale ochreous dorsal line not reaching much more than half its length; sides paler. Reticulations distinct, "foliated." Sole with well-marked transverse lines or grooves, those of either side

meeting in a longitudinal median groove, which divides the foot into two portions. Liver pale grayish. "Uniform tawny as is *Limax flavus*. It stretches itself out in a worm-like shape unlike other species. Internal shell plate, jaw and tongue as in *Andersoni*." (W. G. Binney.)

Gray's Harbor, Washington. (Hemphill, 1889.)

This is probably a variety of *P. pacificum*.

***Prophysaon cœruleum*, n. sp.**

Length (in alcohol) $22\frac{1}{2}$ mill., in motion, 43 mill. Body and mantle clear blue-gray, paler at sides, sole white. Mantle finely granulated, broad, without markings. Length of mantle 7 mill., breadth 5 mill. Respiratory orifice $2\frac{1}{2}$ mill. from anterior border. Body subcylindrical, tapering, pointed. (In one specimen eaten off at the end.) Distance from posterior end of mantle to end of body, $10\frac{3}{4}$ mill.

The reticulations take the form of longitudinal equidistant lines, occasionally joined by transverse lines, or coalescing. Sole not differentiated into tracts. Jaw pale, strongly ribbed. Liver white. Mr. Binney sends me colored drawings of the living animal; the neck is long and white, or very pale. Mr. Binney has examined the jaw and lingual, and finds them as usual in the genus. Several specimens were sent from Olympia, Washington Ter., from Mr. Hemphill to Mr. Binney.

P. cœruleum is an exceedingly distinct species, distinguished at once by its color and the character of its reticulations.

***Prophysaon cœruleum* var. *dubium* n. var.**

Length (in alcohol) 8 mill. Length of mantle 4 mill. Distance from posterior end of mantle to end of body $3\frac{1}{2}$ mill. Mantle broad, with four bands composed of coalesced black marbling, very irregular in shape, and running together anteriorly. Body dark, tapering. Sole pale, its edges gray. Liver white.

With the *P. cœruleum* is a small dark slug, probably a variety of it, but differing as described above. It will easily be distinguished by its blackish color and the peculiar markings on the mantle.

***Prophysaon humile* Cockerell, n. sp.**

Length (in alcohol) $16\frac{1}{2}$ mill. Body above and mantle smoke-color, obscured by bands. Mantle wrinkled, and having a broad dorsal and two lateral blackish bands, reducing the ground-color to two obscure pale subdorsal bands. Length of mantle 7 mill., breadth

5½ mill. Respiratory orifice 2¼ mill. from anterior border. Body subcylindrical, somewhat tapering, rather blunt at end. Distance from posterior end of mantle to end of body 8 mill. Back with a blackish band reaching a little more than half its length, and lateral darker blackish bands reaching its whole length. Reticulations distinct, "foliated." Sole strongly transversely striate-grooved, but not differentiated into tracts. Jaw pale, strongly striate, moderately curved, not ribbed. Lingual membrane long and narrow. Teeth about 35-1-35. Centrals tricuspid, laterals bicuspid, marginals with a large point, and one (sometimes two) small outer points. Liver pale chocolate.

Found by Mr. A. F. Wickham under the bark of rotten logs in the woods around Lake Cœur d'Alene, Idaho, 1889.

In its reticulations, and general external characters, this species resembles *P. andersoni*, of which it is possibly a variety.

OCCURRENCE OF *HELICINA OCCULTA* SAY, IN BROWN CO., WIS.

BY GEO. T. MARSTON.

My first knowledge of the occurrence of this mollusk in Brown County, was in the spring of 1886, when I found a single "dead shell" on the shore of Fox river about two miles south of DePere.

Again, on May 13, 1888, I found five (5) specimens, all alive, upon the banks of a small creek which, rising in a limestone ridge about a mile from where the specimens were procured and about three miles east of DePere, flows into East or Devil River and eventually into Green Bay.

The shells were found, within a space of 300 feet, along the banks of this creek, the land above and below this being under cultivation. They were isolated and were obtained only after careful search, myself and an assistant going over the place frequently.

A week later when another search was made, and in the spring of 1889, no specimens could be found.

The little tract inhabited by this shell is very rich in land and fresh water mollusks, and seems to be a favorite resort of *Helicodiscus lineata*, which lives there in great numbers.

Green Bay, Wis., January 28, 1890.